

WHAT IS CLAIMED IS:

1. A method for manufacturing a rotary electric machine, the rotary electric machine having a stator core with a plurality of slots and a stator winding accommodated in the slots, comprising:

winding conductors on a tool to form a belt-shaped coil;

drawing the tool out from the belt-shaped coil;

curving the belt-shaped coil into a ring; and

mounting the belt-shaped coil on the stator core by inserting the conductors into the slots.

2. The method for manufacturing a rotary electric machine according to claim 1, wherein the stator core is a ring, and the belt-shaped coil is curved into a ring-shaped coil before inserting the conductors into the slots.

3. The method for manufacturing a rotary electric machine according to claim 1, wherein the belt-shaped coil is curved into a ring with the stator core after inserting the conductors into the slots.

4. The method for manufacturing a rotary electric machine according to claim 1, wherein the conductors are wound one over another.

5. The method for manufacturing a rotary electric machine according to claim 1, wherein the conductors are wound on a tool so that the conductors are orderly stacked according to the slots to form the belt-shaped coil, and the belt-shaped coil is mounted on the stator core by inserting the conductors into the slots in a disorderly fashion.

6. A method for manufacturing a rotary electric machine, comprising:
winding a poly-phase stator winding around a tool to form a coil arrangement that has a belt shape so that the coil arrangement has a first end and a second end

in an axial direction of the tool, each phase winding of the poly-phase stator winding having a plurality of coils that are continuous wires;

removing the tool from the coil arrangement;

curving the coil arrangement into a ring so that the first end and the second end of the coil arrangement are overlapped with each other to have a discontinuous portion of the coil arrangement;

providing a rotor;

providing a stator having a stator core with a plurality of slots that have a plurality of regular slots located side by side and a plurality of irregular slots located side by side; and

inserting the coil arrangement into the slots of the stator core so that the discontinuous portion of the coil arrangement is inserted into the irregular slots and a remaining portion of the coil arrangement is inserted into the regular slots, wherein the coils are located on the stator core in a manner that the electrical phase of the coils are difference in 180 degrees.

7. The method according to claim 6, wherein each of the continuous wires has a plurality of in-slot portions and coil end portions, and the coil arrangement is inserted into the slots so that the in-slot portions of the continuous wires are disposed inside the slots and the coil end portions of the continuous wires are disposed outside the slots.

8. The method according to claim 6, further comprising:
providing a frame to support the rotor and the stator.

9. The method according to claim 6, further comprising:
providing a rectifier that rectifies induced output from the poly-phase stator winding.